

Work Order ID 155196

155196

Page 1

Tuesday, January 10, 2017 9:25:12 AM

Item ID: D6201 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: "T" Extrusion 25 JAN 17 2017
 Start Date: 1/12/2017 Start Qty: 20.00 *20*
 Required Date: 1/25/2017 Req'd Qty: 20.00 *20*
 Reference: Cust Item ID: 13
 Customer: 9-89

Approvals: Process Plan: DAS 21 9-89 Date: JAN 10 2017 Tooling: Date: Run Start *NR1*
 QC: 21 9-89 Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6201	Rev A								

100 0.00
 100 PURCHASING 25 JAN 17 2017 DAS 13 9-89
 Purchasing Memo 0.00
 Purchasing Issue P/O: 34971

a)Description: T-beam extrusion

b) 4.00" x 4.00" x 0.375"

c) Minimum Ultimate Tensile Strength = 38ksi

d) Minimum Yield Tensile strength = 35ksi

e) Material: 6061-T6/T6511 (QQ-A-200/8)

f)Material certification required

***EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE
 SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH
 AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS,
 OR DENTS.***

MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE

DQA:

Date:

2017-02-22



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed

Date:

FEB 17 2017

Work Order update only

Work Order: <u>155196</u> Part No. <u>D6201</u> NCR No. <u>17-6292</u>		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☒ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☒ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐							
Date: <u>17/1/30</u>		Step #: <u>100</u>		QTY Effective: <u>0</u>			MRB (QSI042) Approval DAS 12 17/1/30 9-89				
Description Work Order Deviation				Disposition				Completed By DAS 12 17/1/30 9-89			
0.375 thicknesses are over tolerance & tapered. Ref. Attached dwg.				Acceptable. Received thicknesses are within what has historically been received and manufactured. Additional thickness makes part stronger and historic use shows no issue with fit or function. Dwg to be updated per CAR 17-164				Lead hand / Supervisor Approval Verification DAS 9 17-02-09 0-89			
Root Cause Environment ☐ No Re-verification ☐ Design ☒ Operator ☐ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐				FAULT CATEGORY Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Bending ☐ Set-up ☐ Folio/Program ☐ Outside Dimensions ☐ Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance ☐ Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing ☐ Cuffs ☐ Contamination ☐ Out of Sequence ☐ Part Moved ☐ Crushing ☐ Countersink ☐ Off-set ☐ Drawing ☒ Heat Treat ☐ Cut Too Short ☐ Misabeled ☐ Finish ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Fit/Function ☐ Misread ☐ Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence ☐						OTHER:	

Work Order ID 155196

Tuesday, January 10, 2017 9:25:12 AM

155196

Page 2

Item ID: D6201

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: "T" Extrusion

Start Date: 1/12/2017 Start Qty: 20.00

20

Cust Item ID:

Required Date: 1/25/2017 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.07

Packaging

Ensure material certification is attached

25 Sp 17-01-26

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6104

D6201
PD.(25) 17-01-31 DAS
9
9-89**P.T.O.**

130

Identify as per dwg & Stock Location: _____

0.00

130

Packaging

Memo

0.03

Packaging

LOCATION: MAT028

25' S.L. 17-02-09

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☒

Work Order: <u>155196</u> Part No. <u>D6201</u> NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval DAS 9 9-89 17-06-27																																																																	
Description Work Order Deviation typo seq 120 memo says D6201 Dwg D6104 but should be D6201 See NCR17-6242 DAS 9 9-89 17-01-31				Disposition 		Completed By DAS 10 9-89 Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																																	
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		OTHER : _____																																																																					

Work Order ID 155196

155196

Page 3

Tuesday, January 10, 2017 9:25:12 AM

Item ID: D6201

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: "T" Extrusion

Start Date: 1/12/2017 Start Qty: 20.00

20

Cust Item ID:

Required Date: 1/25/2017 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.33

Quality Control

17/2/8 J

FEB 07 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Tuesday, January 10, 2017 9:25:15 AM

20
SP 17-01-26

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

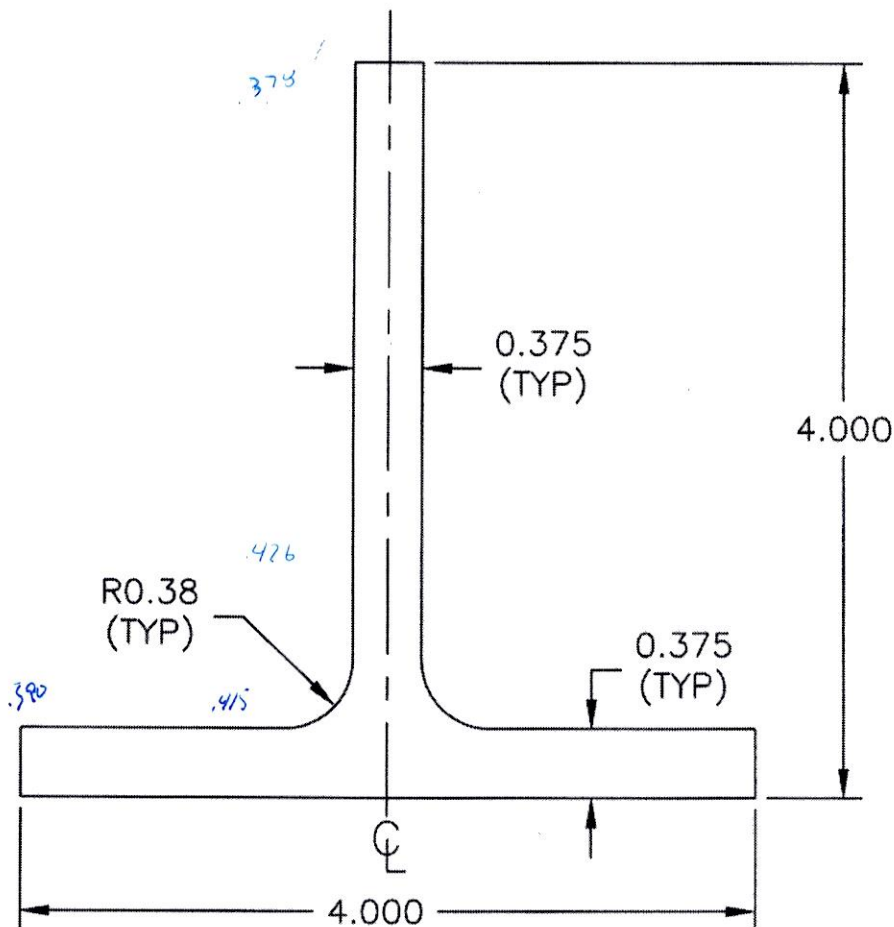
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Misidentified ☐	Past Due ☐																																																																



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6201	REV. A SHEET 1 OF 1
DATE 01.04.10		TITLE T-BEAM EXTRUSION	SCALE 1:1
A	01.04.10	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
01.04.23 *[Signature]*



D6201-XXX T-BEAM EXTRUSION
WHERE XXX IS LENGTH IN INCHES

EG.
D6201-027 IS 27 INCHES LONG

PURCHASE MATERIAL: ALUMINUM "T"-EXTRUSION ROUND FILLET
4.000" x 4.000" x 0.375"
6061-T6/T6511 (QQ-A-200/8)
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
MINIMUM YIELD TENSILE STRENGTH = 35 ksi

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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3-10-18
NO. 1551916
WORK ORDER
SUBJECT TO AMENDMENT
WITHOUT NOTICE
CONTROLLED COPY
RETURN TO
ENGINEERING
SHOP COPY



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO34971

Purchase Order Date 1/17/2017 8:23:23 AM
PO Print Date 1/17/2017

Page Number 1 of 2

Order From : VC-CAM002

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

~~CAMP STEEL~~ *acier Ouellette*
935 BOUL. DU HAVRE
VALLEYFIELD, QC J6S 5L1
CA

EMAILED

JAN 17 2017

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	800 667 4248	Customer POID	
Ship To Contact		Customer Tax #	10127-2607
Ship To Phone		Terms	Net 30
Ship Via:	Yours ppd	Currency	CAD
Ship Acct:		FOB	FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D6201P AS PER DWG D6201 REV. A B155196	T Extrusion 4X4X3/8	1/24/2017 Yes 1/24/2017		25.00 <i>f</i>	\$48.80	\$1,220.00
<i>Spr 01-24</i> Line Total:							\$1,220.00
5	71401-45 Procurement Quality Clauses A005 right of entry A012 chemical and physical test report A016 personnel qualification A017 raw material identification (as applicable) A026 certification of material conformance A041 quality management system A042 dart notification by supplier A043 retention of quality documents	PROCUREMENT QUALITY CLAUSES	1/24/2017 No 1/24/2017		1.00	\$0.00	\$0.00

Note:

1/17/2017

**ACIER OUELLETTE INC.**

935, Boul. du Havre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

DELIVERY - CLIENT

C000011307

Billed to

DART AEROSPACE LTD
1270, ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

DART AEROSPACE LTD
,
Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Customer N°

CLI0001056

Date

2017/01/17

Delivery date**2017/01/24****Your order N°**

34971

Processed by

Josianne Bourdon

Salesman**Carrier**

OUELLETTE VALLEYFIELD

Credit Terme

NET 30

Page

1

Instruction F-M**Delivery Route** 5

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
1 TEE 6061T6 4 X 4 X 3/8 PLI TEE AL. 4 X 4 X 3/8 1 X 25' TEL QUE DESSIN ATTACHÉ NS000000022		1.00	UN_\$UN		1x25						
2017-01-24											

Conditions :**Total Weight (Lbs) :** 0.00

All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 20% restocking charge.

Prepared By :

Verified By :

Delivered By :

Time

Customer's Signature

Date

Total (\$CAD)

**ACIER OUELLETTE INC.**

935, Boul. du Havre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Order - Sales

CO00011504

Customer N° CLI0001056
Date 2017/01/17
Delivery date **2017/01/24**
Your order N° 34971
Processed by Josianne Bourdon
Salesman
Carrier OUELLETTE VALLEYFIELD
Credit Terme NET 30
Page 1

Billed to

DART AEROSPACE LTD
1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

DART AEROSPACE LTD
, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Delivery Route 5

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
1 TEE 6061T6 4 X 4 X 3/8 PLI NS00000022 TEE AL 4 X 4 X 3/8 I X 25' TEL QUE DESSIN ATTACHÉ HEAT: 201616047		1.00	UN_\$UN	1.00							
SURCHARGE ENERGETIQUE FRAIS_ENERGETIQUE			\$	0.00							

Total Weight (LBS) : 1 0.00

Conditions :

All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 20% restocking charge.

Prepared By :	Verified By :	Delivered By :	Time	Customer's Signature	Y	M	D

Total (\$CAD) 1 383.06
Deposit 0.00
Balance 1 383.06

Rod Crane



Service Center Metals

5850 Quality Way
Prince George, VA 23875

CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS



OUR ORDER NUMBER	ITEM
271716	7

MANIFEST NUMBER 306581
CUSTOMER PO P60817CG006
CUSTOMER PART NUMBER Y-1528
DE NUMBER T0568
ALLOY/TEMPER 6061-T6
DESCRIPTION AST 4.000x4.000x.375
DATE OF SHIPMENT 9/22/2016
SALESPERSON Ellis Williams

CERTIFICATION
ASTM-B308-10 SPOT STENCIL
SPECIFICATION
ASTM-B221-14

Quantity Certified 2,808 lbs 30 pcs

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6. This product is RoHS-2, REACH, and DFARS compliant.

Mechanical Properties

Test#	Lot No.	Test Date	Ultimate Tensile Strength (KSI)		Yield Strength (KSI)		Percent Elongation	
			min	max	min	max	min	max
1	201616047	9/21/16	46.70	46.70	44.00	44.00	14.55	14.55

THIS IS A TRUE COPY OF THE ORIGINAL
MILL TEST REPORT NOW ON FILE
RECEIVED AND INSPECTED

SEP 23 2016

BY *Lisa Lopez*
LISA LOPEZ, CERTIFICATION PROCESSOR

Chemical Composition for Aluminum Alloy 6061

Cast #	Lot No.	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Others		Melt Source
												Each	Total	
2K160918C	201616047	6061	0.61	0.21	0.21	0.07	0.86	0.07	0.01	0.02	97.95	0.05	0.15	United States of America
2M160914C	201616047	6061	0.62	0.18	0.20	0.05	0.85	0.06	0.01	0.02	98.00	0.05	0.15	United States of America
2M160918C	201616047	6061	0.61	0.21	0.21	0.07	0.86	0.07	0.01	0.02	97.95	0.05	0.15	United States of America

SCM products are melted and extruded in the USA

Calvin J. Wiggins, Director of Quality & Technical Services

Print Date: 9/22/2016

Rev 5/8/16



Supplier Non-Conformance Report

Reviewed
DQA:
Date:

Printed on: Monday, January 30, 2017

Details

Raised Date 1/27/2017	Status Open	Owner Maranda, Denis	Number NCR17-6242
Target Date 2/7/2017	Standard	Severity	
Process Inspection		Audit	
Raised By Person Duval, Patrick	Raised Against (Department or Supplier)		Fault Category Material
Details during inspection it was found that D6201 material was not to drawing. Material is tapered, top portion is .426" to .378" and flat section is .415" to .390". Also dart drawing call for spec. QQ-A-200/8 and received material is ASTM-B-221-14.P034971			
Keywords D6201		Product D205-523\D6201	
Document		Root Cause	
Closed By	Closed Date	Resolution	

Corrective Action

Target Date	Owner Downing, Eric M	Closed Date	Closed By
Details			

Actions

Number	Owner	Target Date	Completed Date
Details			
1	Lavoie, Chantal	2/6/2017	
contact supplier for replacement			
2	Provencal, Chris	1/31/2017	
get approval from engineering if material are exceptable		Acceptable ss-is	
3	Duval, Patrick	1/31/2017	
open PAR to revise material spec		CAR17-164	

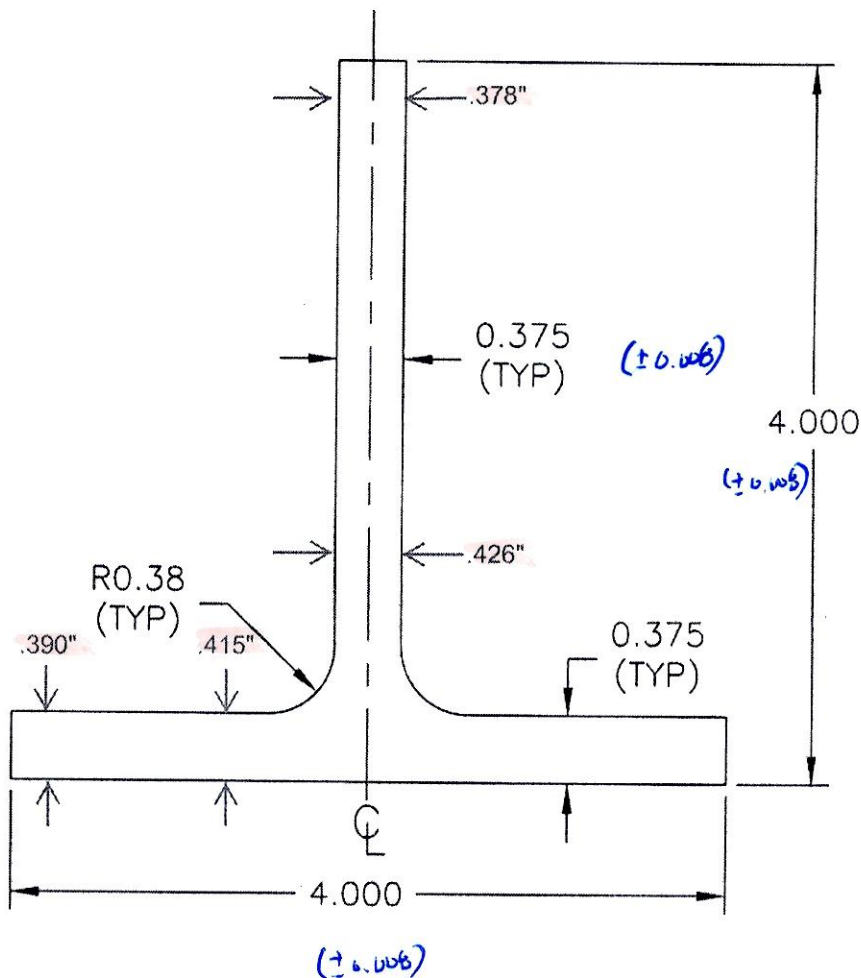


DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6201	REV. A SHEET 1 OF 1
DATE 01.04.10		TITLE T-BEAM EXTRUSION	SCALE 1:1
A	01.04.10	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
01.04.23 *[Signature]*

ANSI H35.2 ~~spec~~
tolerance written
for reference
in brackets



D6201-XXX T-BEAM EXTRUSION
WHERE XXX IS LENGTH IN INCHES

EG.
D6201-027 IS 27 INCHES LONG

PURCHASE MATERIAL: ALUMINUM "T"-EXTRUSION ROUND FILLET
4.000" x 4.000" x 0.375"
6061-T6/T6511 (QQ-A-200/8)
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
MINIMUM YIELD TENSILE STRENGTH = 35 ksi

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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